Internet Crime Mapping: From Conception to Release and Beyond

THE 9th CRIME MAPPING RESEARCH CONFERENCE

March 28-31, 2007 Pittsburgh, PA

Workshop Topics

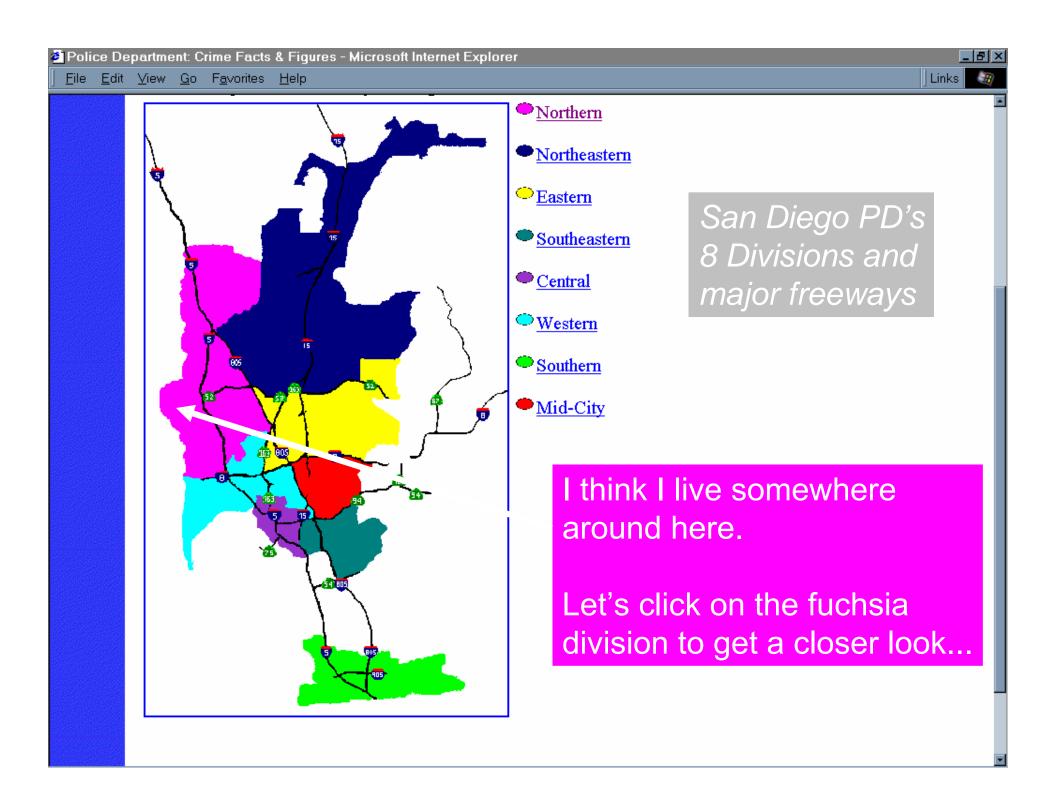
- ► Implementation of an Internet crime mapping application (Crime MAPS)
- ► Advantages and Challenges of public Internet crime mapping
- ▶ Differences between public and LE only
- ▶ Resources

How many people here...

- → Have crime maps on their agency web pages? Static? Interactive?
- → How many put crime information on their pages?
- → Who is currently planning/discussing the implementation of a crime mapping web site?

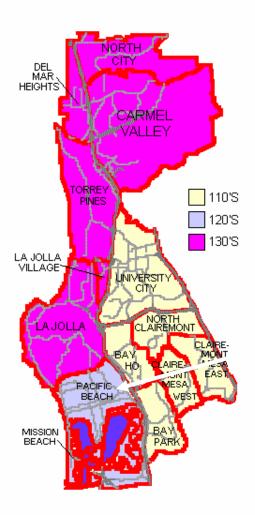
Crime Mapping on the Web Evolution

- ► Late 1995/early 1996, 1st sites
- ► Technology changes
 - Big advancement
- ► Policing and Public changes
 - Little advancement
- ► Today... about 115 sites around the world





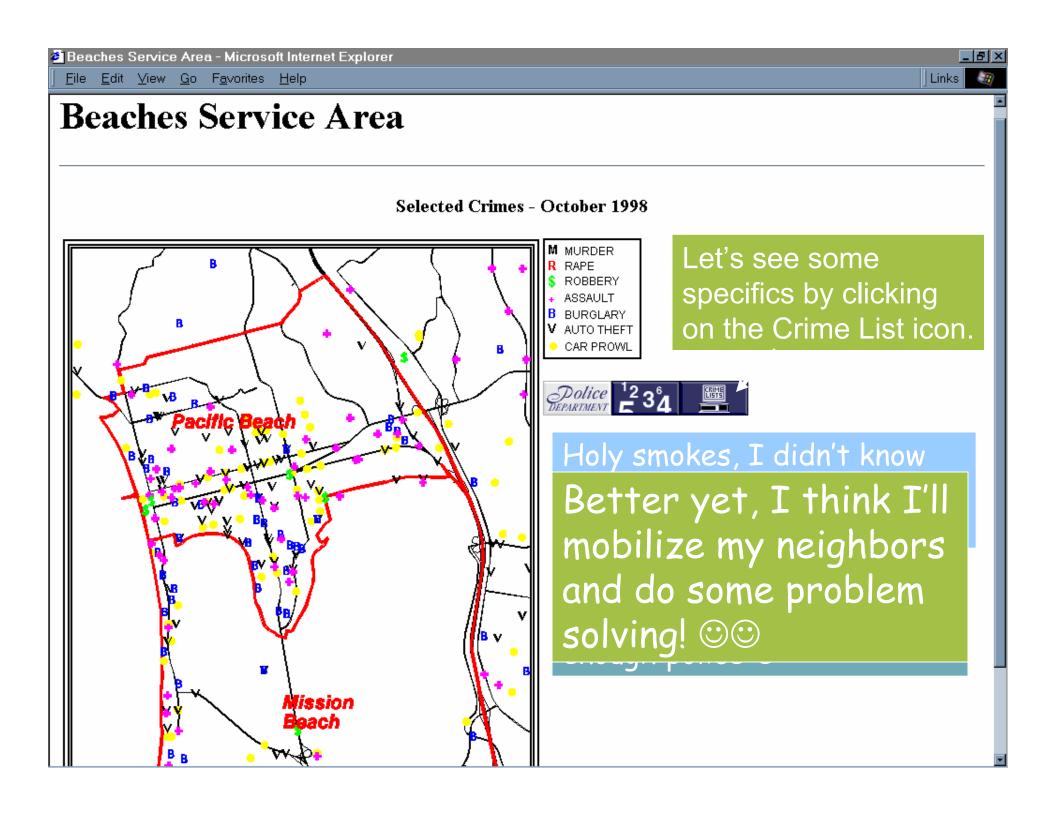
NORTHERN DIVISION



Pacific Beach, that's it, that's the name of my neighborhood...

Click on the appropriate shaded area.

If you are unable to use the links on the maps, Service Area Crime Maps for Northern Division are available through the following links 110,120, and 130.



COMMERCIAL ROBBERY - Pacific Beach

Date Range	Time	Location
10/10/1998-10/11/1998	2358-0020	1800 GRAND AV
10/31/1998-10/31/1998	1150-1150	4400 MISSION BL

STREET/RESIDENTIAL ROBBERY - Pacific Beach

Date Range	Time	Location
10/15/1998-10/15/1998	0040-0050	2100 PACIFIC BEACH DR
10/22/1998-10/22/1998	0120-0120	700 GRAND AV

COMMERCIAL BURGLARY - Pacific Beach

Date Range	Time	Location
10/06/1998-10/06/1998	0238-0238	900 TURQUOISE ST
10/09/1998-10/09/1998	0213-0215	3400 INGRAHAM ST
10/11/1998-10/11/1998	1645-1645	4200 INGRAHAM ST
10/06/1998-10/14/1998	1100-1000	$600~\mathrm{CHALCEDONY}~\mathrm{ST}$
10/28/1998-10/28/1998	0130-0130	2700 GARNET AV

RESIDENTIAL BURGLARY - Pacific Beach

Date Range	Time	Location
10/01/1998-10/01/1998	1400-1630	800 DIAMOND ST
10/05/1998-10/05/1998	0900-1900	4000 INGRAHAM ST
10/06/1998-10/06/1998	1230-1515	3800 SHASTA ST
10/05/1998-10/06/1998	1900-0730	1400 GRAHAM ST
10/07/1998-10/07/1998	0630-1900	4600 LAMONT ST



San Diego County Regional Crime Mapping Application for Public Safety (Crime MAPS)

Life before Crime MAPS...

- ► San Diego Police Department web site
 - 1996, static maps updated monthly, city only
- ► ARJIS Interactive Mapping Application (IMA)
 - 1999, Countywide multi-jurisdictional public only
 - 2001, Independent evaluation public input
 - 2002, Enhancements and IMA2 requirements

San Diego County Regional Crime MAPS Objectives

Web-based, user-friendly (two sites: public and law enforcement only)

► Search:

- For crimes, arrests, field interviews (fi's), probation conditions, outstanding warrants
- By address, beat/neighborhood, school, park, landmark
- By date, day of week and time ranges

▶ Data:

- 2 years for law enforcement
- 1 year for public

Public Site Enhancements

- Data
 - Additional crime types
 - Extended date parameters
- ► Enhanced functionality
 - Easier to use more intuitive
 - Better symbols
 - Crime and arrest comparison on the same map
 - More customizable
 - Printed Reports with legends

Application Implementation Steps

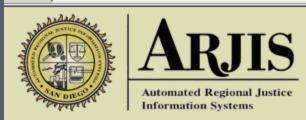
- ► Assessing Needs
- ► Writing Requirements
- Reviewing What Exists
 - Technology
 - Applications of other jurisdictions
- ► Picking a Vendor
 - Issuing an RFP/RFI/RFQ (or sole source if you're lucky)
 - Evaluating the Responses

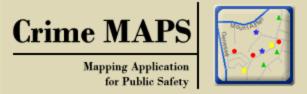
Application Development

- ► Committees User, Technical, Policy
- ▶ Technical
 - Data, Data, Data
 - Size, Shape and Stability
- User
 - From colors to crime groups
 - From symbology to site structure
 - From queries to questions (FAQs)
- ► Testing... Modifying... Testing

So... what does it look like and how does it work???

http://mapping.arjis.org





CRIME MAPS DISCLAIMER

This Web page is a public resource of general information. The Automated Regional Justice Information System (ARJIS) does not make any warranty, representation or guarantee as to the content, sequence, accuracy, timeliness or completeness of any of the database information provided herein for any reason. All aspects of the data provided herein are susceptible to a degree of error due to the complexities of the process involved in compiling and programming the data.

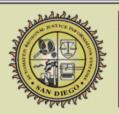
All materials contained on this site are distributed and transmitted "AS IS" without warranties of any kind, either express or implied including without limitation, warranties of title or implied warranties of merchantability or fitness for a particular purpose. In no event shall ARJIS or its member agencies become liable to users of these data for any loss or damages, consequential or otherwise, including but not limited to time, money, or goodwill, arising from the use, operation or modification of the data. The visual presentation of data is being provided strictly as a courtesy and not as an obligation to its readers. ARJIS and its member agencies do not have the available staff to assist in the interpretation of the data presented herein.

The ARJIS Website should not be relied upon for emergency services and is in no way designed to serve as an alternative to emergency services provided by the 911 emergency telephone service. If you have an emergency or important time-sensitive crime information, please communicate this information to the appropriate law enforcement agency within your jurisdiction through the 911 emergency telephone service.

To proceed through this site, you must acknowledge that you have read this disclaimer and that you understand that the information is being provided for informational purposes only.

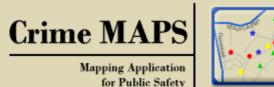
Accept

Decline









About San Diego County Regional Crime MAPS

This page provides background information about this website and should be read by all first-time users. This is the initial version (1.0.13) of Crime MAPS and was released to the public on July 17th, 2006. Please check back frequently as changes and additions to the site will continually be released. If you have already read this, you can go directly to the first screen by clicking the "Go To Mapping Application" at the bottom of this page.

The following topics are covered on this page:

- · Origin of the Crime MAPS incident data
- Location options
- · Types of incidents available for mapping
- · Time periods of the incident data
- · Incident attributes
- · Incident locations on the map
- Comparison with incident descriptions in the media
- Comparison with published law enforcement agency data
- Different results on different days
- School and shopping center data
- Help file
- · Contact information

Origin of Crime MAPS incident data

The primary local law enforcement agencies in San Diego County take reports for all crime cases, arrests, citations and some traffic collisions. The reports are entered into the Automated Regional Justice Information System (ARJIS), which provides the incident data for Crime MAPS. Agencies that provide data to ARJIS include the Cap Diego County Chariff, all city police departments in Cap Diego County, the Cap Diego Market Delice, the



Regional Crime MAPS









San Diego County

About Crime MAPS



Location

Select a Location



Next

Selection Summary

Help

Where do you want to look for incidents? This screen allows you to choose the jurisdiction (unincorporated area in the county, city, neighborhood or political district) and location of interest. The location can be a school, hospital, ZIP code, neighborhood, tourist attraction, major shopping center, address, or intersection.

Show Map of Jurisdictions



Incidents



Time Period



JURISDICTION

Political Districts

Carlsbad

Chula Vista

Coronado

⊕ County Unincorporated

Del Mar

⊞ El Cajon

Encinitas

Escondido

Imperial Beach

La Mesa

Lemon Grove

National City

Oceanside

Poway

San Diego

San Marcos

C----



Regional Crime MAPS









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Political Districts

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⊕ County Unincorporated Del Mar

⊞ El Cajon

Encinitas

Escondido

Imperial Beach

La Mesa

Lemon Grove

National City

⊕ Oceanside

Poway

San Diego

San Marcos

Canton

ESCONDIDO

Schools
Hospitals
ZIP Codes
Tourist Attractions
Major Shopping Centers
Address
Intersection

Select a location type from the list above. Based on your choice, you will be presented with a list of specific locations to choose from or input boxes for entering address information.

Some location types allow the selection of a radius around the selected location that will generate a shaded area on the results map. When this option is available, a list



Location



Incidents



Time Period



Map.

Copyright © 2006 ARJIS/SANDAG/SanGIS

Select a Location



Next

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Show Map of Jurisdictions

JURISDICTION

Political Districts Carlsbad Chula Vista Coronado

- ⊕ County Unincorporated Del Mar

Escondido

Imperial Beach

La Mesa

Lemon Grove

National City

⊕ Oceanside

Poway

 ★ San Diego

San Marcos

Santee

Escondido

Schools Hospitals ZIP Codes Tourist Attractions Major Shopping Centers Address

Intersection

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SCHOOLS

Classical Academy	_
Coastal Academy	
Conway	
Del Dios	
Escondido Adult	
Escondido Adventist	
Escondido Apostolio	
Escondido Charter	
Escondido High	
Felicita	
Glen View	~
Control California	_

Select up to 3 Schools.

Multiple Schools can be selected by holding the control or shift key while clicking a name.

Radius for shaded area around the selected location:

1/4 mile

500 feet

1000 feet

1/4 mile

1/2 mile

1 mile



Location

Select the Incidents

Prev

Next

Selection Summary

Help

What type of information are you interested in? This screen allows you to select the type of incident by clicking the incident name or the box next to the incident name. To select or deselect all the incident types in a category, click the folder next to the category name.

Incidents



Time Period



Map

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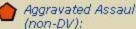
INCIDENT TYPES

MAP SYMBOLS AND INCIDENT DEFINITIONS



- Aggravated Assault (non-DV)
- Arson
- Commercial Burglary
- Homicide
- Malicious Mischief/Vandalism
- Rape
- Residential Burglary
- Robbery
- Sex Crimes (Other)
- Simple Assault (non-DV)
- Theft
- Vehicle Break-in
- Vehicle Theft
- Arrests and Citations
 - Curfew Violation
 - Deadly Weapons
- Drunk in Public
- Narcotics

Crimes



Aggravated Assault Attack on a person to commit severe/aggravated injury, usually

involves a weapon. Does not include Domestic Violence (DV).

on: Willful, malicious burning of structure, vehicle, or personal

property.

Commercial Burglary: Unlawful entry of a commercial

structure to commit a theft or other

felony.

Unlawful killing of one person by lomicide:

another.

Malicious Willful, malicious destruction, damage, or defacement of Mischief/Vandalism:

property.

Carnal knowledge of a female Rape:

forcibly and against her will.

Residential Burglary: Unlawful entry of a residential



Location

Select the Incidents

Prev

Next

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Incidents



Time Period



Map.

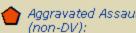
Copyright @ 2006 ARJIS/SANDAG/SanGIS

INCIDENT TYPES

Crimes

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Residential Burglary: Unlawful entry of a residential.

V







Location

Select a Time Period

Next

Selection Summary

Help

What is the time period of interest? This screen allows you to choose a date range, time range, and the days of the week. Incidents are available for the last 12 months. To select a date, navigate the calendar using Prev/Next or choose a month from the drop down list, then click on a date to select it.

DATE RANGE

Start date: 7/1/2006



End date: 9/30/2006

<prev< th=""><th>S</th><th>eptemb</th><th>er 💌</th><th>2006 [</th><th>~</th><th>Next></th></prev<>	S	eptemb	er 💌	2006 [~	Next>
Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
1	2	3	4	5	6	7

TIME RANGE AND DAYS OF WEEK

From time: 12 V: 00 V AM V To time: 11 🕶 : 59 🕶 PM 💌

Select or deselect a day of the week by clicking the box next to its description

Predefined days:

- All Davs
- O Weekdays
- O Weekends

O Clear Selected

Days:

- ☑ Monday
- ☑ Tuesday ☑ Wednesday
- ☑ Thursday
- ☑ Friday
- ☑ Saturday
- ✓ Sunday

Current date range: 92 days

Current time range: 24 hours



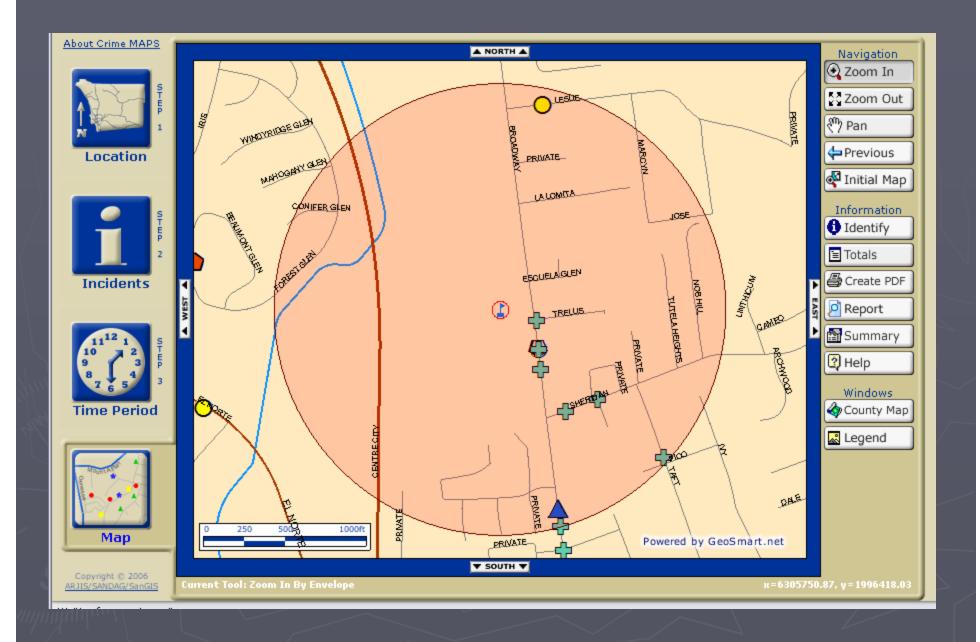


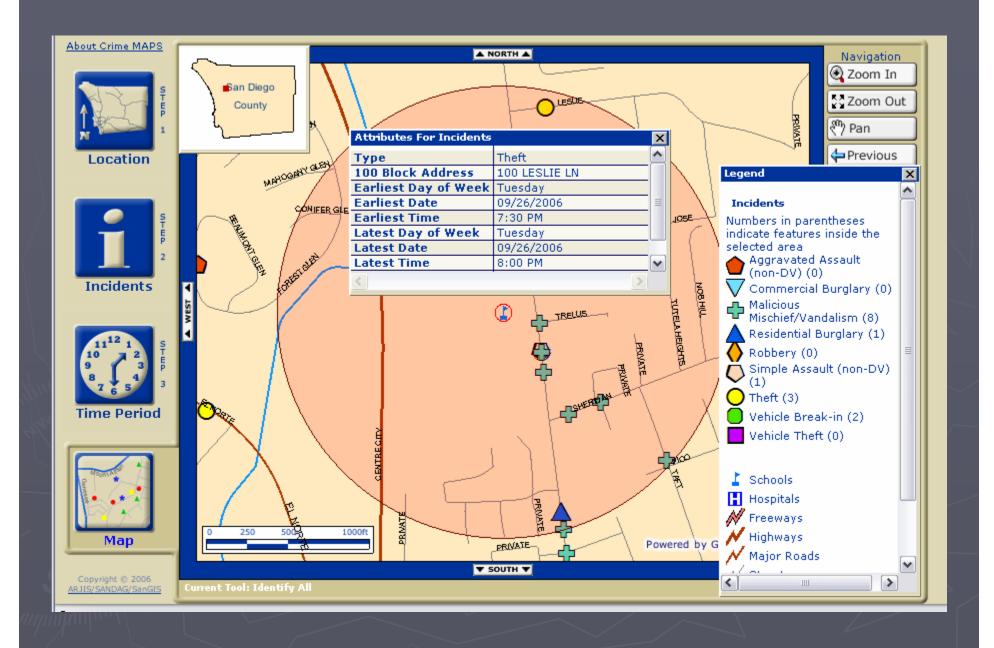
Time Period

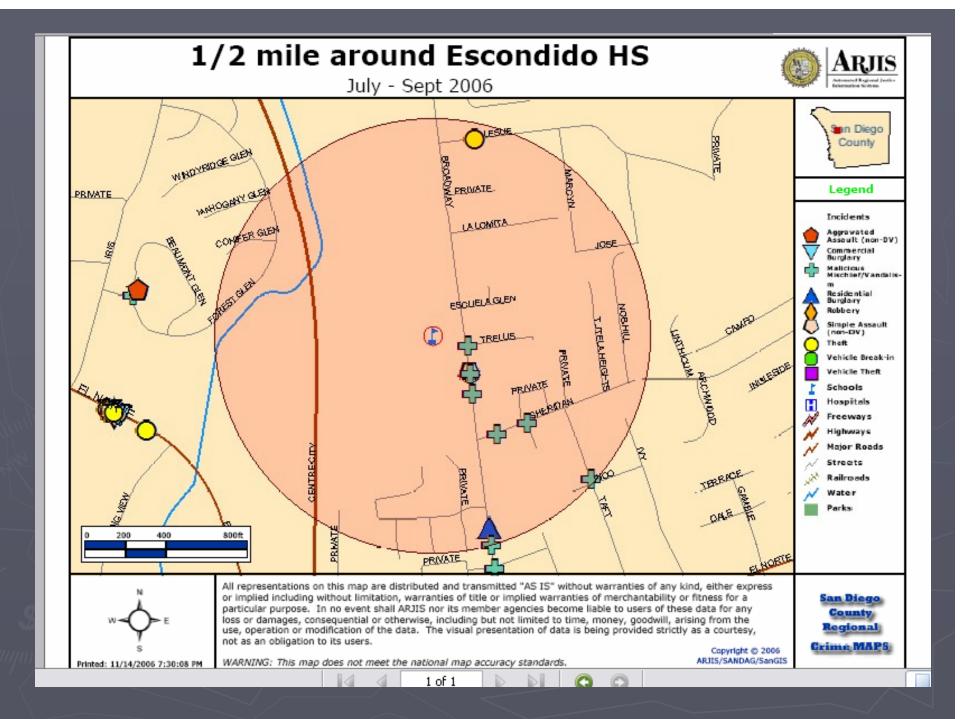


Map.

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http://mapping.arjis.org - Crime MAPS Report - Mozilla Firefox





Crime MAPS Incident Report

Sort Options Print Report Close Window



Sorted	Ву:	Date	ascending,	Time	ascend	ing
100 Blo	ch i	Addre	e e	Da	·	Πn

#	Incident	100 Block Address	Day	Date	Time
1	Malicious Mischief/Vandalism	1400 TAFT AV	Tuesday	07/25/2006	4:50 PM
2	Malicious Mischief/Vandalism	100 SHERIDAN AV	Sunday	07/30/2006	9:00 PM
3	Residential Burglary	1400 N BROADWAY	Saturday	08/12/2006	09:00 AM
4	Malicious Mischief/Vandalism	200 SHERIDAN AV	Sunday	08/13/2006	3:00 PM
5	Malicious Mischief/Vandalism	1400 N BROADWAY	Sunday	08/13/2006	3:40 PM
6	Theft	1500 N BROADWAY	Friday	08/25/2006	11:00 AM
7	Malicious Mischief/Vandalism	1500 N BROADWAY	Saturday	08/26/2006	9:49 PM
8	Malicious Mischief/Vandalism	100 TRELLIS LN	Sunday	08/27/2006	01:30 AM
9	Vehicle Break-in	1500 N BROADWAY	Tuesday	09/05/2006	4:00 PM
10	Malicious Mischief/Vandalism	1500 N BROADWAY	Tuesday	09/05/2006	4:00 PM
11	Vehicle Break-in	1500 N BROADWAY	Wednesday	09/06/2006	12:40 PM
12	Theft	1500 N BROADWAY	Monday	09/11/2006	2:50 PM
13	Simple Assault (non-DV)	1500 N BROADWAY	Wednesday	09/20/2006	2:20 PM
14	Theft	100 LESLIE LN	Tuesday	09/26/2006	7:30 PM
15	Malicious Mischief/Vandalism	1500 N BROADWAY	Wednesday	09/27/2006	10:30 AM

***Note: Day, Date and Time represent the earliest recorded values for each incident.

Report Parameters

Location: Escondido - Schools: Escondido High, Shaded radius: 1/4 mile

Incidents: Aggravated Assault (non-DV), Arson, Commercial Burglary, Homicide, Malicious Mischief/Vandalism, Rape, Residential Burglary, Robbery, Sex Crimes (Other), Simple Assault (non-DV), Theft, Vehicle Break-in, Vehicle Theft

Time Period: 7/1/2006 - 9/30/2006, 12:00 AM - 11:59 PM, All days of the week

Some Stats

- ▶ 1st 7 months (July 17, 2006 Feb 20, 2007)
 - 219,011 visitors
 - Average visit duration just under 12 minutes
 - Most active Tues, 3pm-4pm
 - Least active Sat, 3am-4am
 - Repeat visitors
 - ▶17% of visitors have visited more than once
 - ▶ .2% have visited more than 9 times
 - Average visitors per day Jul-Aug 2006 2,979
 - Average visitors per day Jan-Feb 2007 622

Technical Mumbo Jumbo

- ► ARJIS mainframe extract
 - Already geocoded
- ► Imported into SQL server
 - A bit of data manipulation (hundred block, crime category)
- ► ArcIMS and ArcSDE from ESRI
- ► GeoSmart from Moosepoint
- ► App works in IE, Firefox, Netscape & Safari

^{*}For more detailed technical, let me know and I'll find out for you.

A Unique, New Crime-related Page

- Washington Coalition to Reduce Underage Drinking
 - Washington State Dept of Social & Health Services
 - Washington State Liquor Control Board
 - Washington Traffic Safety Commission
- ► Alcohol Beverage Control data
- ► Looking Glass Analytics
 - Development
 - Evaluation

Home | About This Site | Tutorial | Support | Can't find a licensee? | Links





Division of Alcohol and Substance Abuse www1.dshs.wa.gov/dasa





Washington Traffic Safety Commission



Please be aware that you may experience slower performance in our web services today or any day where NCAA basketball tournament games are being streamed live. Worldwide internet performance suffered last year at this time and the potential exists again this year. If you experience difficulty generating a report, please try refreshing the report window or simply re-try the request.

If you have an urgent need for a report and have trouble producing it using the web service, please call Bill Luchansky (360) 570-7532. We apologize for any inconvenience you may experience.

Welcome to www.WAruad.net!

www.waruad.net is an easy-to-use mapping and data query tool that offers analytic access and geographic display of data related to underage drinking. While there are many factors that influence youth and young adults to drink before they are of legal age, this web site centers on one often cited factor: liquor licensees who sell alcohol to minors.

Additional features of this web site include:

- statewide mapping of liquor licensees by license type and recent liquor law violations
- full history of compliance checks and premise checks conducted by Liquor Control Board enforcement officers at individual establishments
- full history of violations at individual establishments
- · measures of community-level density of liquor licenses, and
- other contextual data including local demographics, treatment centers, etc.



Yakima

Klickitat

Franklin

Benton

Walla Walla Columbia

Scale 1: 3,500,000

Garfield

Asotin

LCB Enforcement Activity

1

1

1

1

Enforcement Activity

Query/Search

Saved Views

Map Markup

Help

Pacific

Wahkiakum

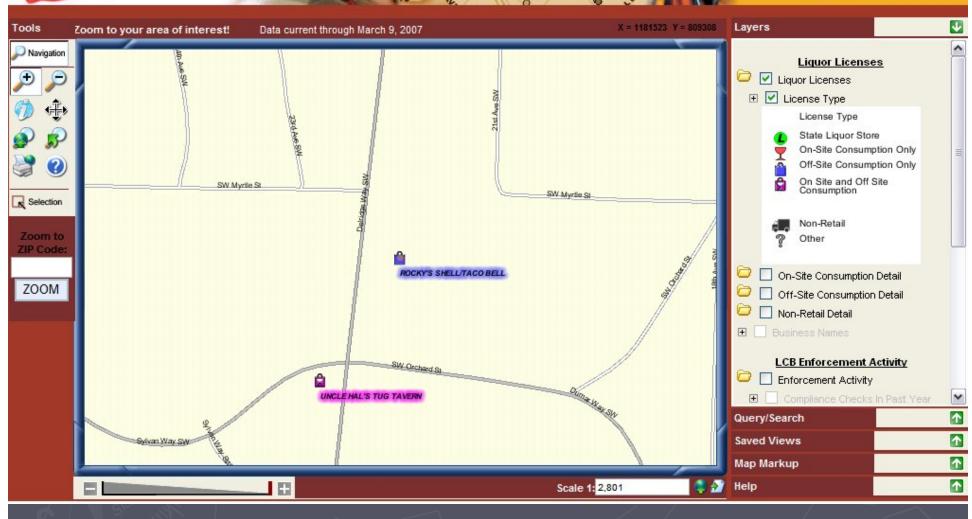
Cowlitz

Clark

VANCOUVER

Skamania





ROCKY'S SHELL/TACO BELL

7132 DELRIDGE WAY SW SEATTLE, WA 98106

Liquor License: 072642

Business Id: 6006349300020002

Privileges: GROCERY STORE - BEER/WINE

Check Type	Date	Check Outcome
Premises	Jan 24, 2007	
Premises	Aug 17, 2006	
Premises	Aug 17, 2006	
Compliance	Aug 17, 2006	NO SALE
Premises	Jun 30, 2006	
Premises	Jun 30, 2006	
Premises	Mar 16, 2006	
Compliance	Mar 16, 2006	NO SALE
Premises	Nov 3, 2005	
Premises	Nov 3, 2005	
Premises	Oct 26, 2005	
Compliance	Oct 26, 2005	SALE
	SALE/FURNISH	HING TO PERSON(S) UNDER 21 YOA
	Disposition: Wr	itten Warning Issued

Benefits for the Public

- ► Easily accessible crime information
- ► Increase knowledge about...
 - Crime trends and patterns in your neighborhood
 - Police activity
- ► Get informed for community meetings
- ► Quick and free (viewed from any Internetaccessible computer... even a Mac!)

Benefits for Law Enforcement

- ► Increase knowledge about...
 - Crime trends and patterns in your neighborhood
 - Who the bad guys are on your beat
 - Problem solving
- Stay informed for community meetings/enhance community relations
- ► Less inquiries from the public
- Quick (you don't have to wait for your analyst to make maps for you!), easy and accessible from any ARJISNet computer

What are the Issues?

- **▶** Politics
- ► Legality
- ► Data
- ► Cartography

Maximizing the Use of Your Page

- **►** Community
 - Organized Groups
 - Residents/Businesses
 - People moving to your City
 - Non-LE agencies applying for funding
- ► Law Enforcement
 - Your own Department
 - Other Agencies

Resources

- ► NIJ MAPS web site (www.ojp.usdoj.gov/nij/maps)
- ► Privacy in the Information Age publication (free from NCJRS www.ncjrs.gov)
- List of other public crime mapping web sites (let me know and I'll email it to you)